

Starting a Dairy in Missouri



A resource guide to help potential new dairy producers in Missouri understand the steps necessary to begin a dairy in the state

December 2010

Guide Prepared By:

UNIVERSITY OF MISSOURI
 **Extension**
Commercial Agriculture Program



Starting a Dairy in Missouri

This guide was developed to help potential new dairy producers in Missouri understand the steps necessary to begin a dairy in the state. It is a step by step guide to information sources and to the regulatory agencies that will need to be contacted before construction begins in order to obtain the proper approvals and permits to eventually ship milk.

Research Dairy Markets

The first consideration in developing a new dairy in Missouri is to investigate potential markets for your milk. Dairy marketing cooperatives will market producer milk in most areas of Missouri. However, those areas of Missouri outside of existing dairy clusters may have to pay extra for hauling their milk to markets or a market may not even exist. The dairy should evaluate market conditions to seek the most profitable and secure choice for their milk marketing. Most dairy marketing cooperatives also have fieldmen who can help guide new dairy producers through the permitting and approval process. Because these coop fieldmen can facilitate the startup process, they should be brought into the planning as early as possible. If you are considering buying a property that has been a dairy farm or still is, be sure to visit with a milk inspector or dairy plant field person regarding suitability of existing milk parlor before purchasing the property. Some dairy milking parlors may require considerable remodeling before qualifying to market Grade A milk under a new permit.

Market Outlets for Missouri Dairy Farmers

Arkansas Dairy Cooperative Association Damascus, AR

- Phone: (501) 335-7204
- Coverage: SW Missouri
- Fax: (501) 335-7705
- Grade A milk

Central Equity Milk Cooperative, Inc. Mountain Grove, MO

- Phone: (417) 766-6376
- Coverage: SW Missouri
- Fax: (417) 926-5818
- Grade A, manufacturing grade, and organic milk

Market Outlets (continued)

Dairy Farmers of America, Inc. (DFA) Kansas City, MO

www.dfamilk.com

- Phone: (816) 801-6455
- Coverage: Missouri
- (800) 279-9122
- Grade A milk in Missouri;
- E-mail: webmail@dfamilk.com
- and manufacturing grade milk in certain areas

Dairy Marketing Service, LLC Kansas City, MO

www.dairymarketingservices.com

- Phone: (866) 367-8181
- Affiliated with DFA
- Fax: (501) 335-7705
- Grade A milk

Dairymen's Marketing Cooperative Mountain Grove, MO

- Phone: (417) 926-7460
- Grade A milk

Farmers All Natural Creamery Wellman, IA

www.farmersallnaturalcreamery.com

- Phone: (319) 646-2004
- Coverage: N Missouri
- Fax: (319) 646-6836
- Organic milk

Lone Star Milk Producers Windthorst, TX

www.lonestarmilk.net

- Phone: (888) 828-7827
- Coverage: S Missouri
- Fax: (940) 378-2571
- Grade A milk

Prairie Farms Dairy, Inc. Carlinville, IL

www.prairiefarmsdairy.com

- Phone: (217) 854-2547
- Coverage: E Missouri
- E-mail: icebox@prairiefarms.com
- Grade A milk

Twin County Dairy, Inc. Kalona, IA

www.twincountydairyinc.com

- Phone: (319) 656-2776
- Coverage: N Missouri
- Fax: (319) 656-2761
- Grade A milk



Consult with University of Missouri

University of Missouri Extension has state or regional specialists located in every county in the state. Specifically, specialists that would be the most helpful to contact would be the dairy specialists, livestock specialists or agricultural business specialists.

These specialists can be used to obtain help in the following areas:

- Business planning and feasibility analysis
- Location and site evaluation
- Environmental impacts
- Other dairy production expertise
- Local infrastructure available to support a dairy business

Below is information to assist in contacting these specialists:

MU County Extension Offices:

<http://extension.missouri.edu/regions/>

MU Extension Employee Directory

<http://extension.missouri.edu/staffdirectory/directorysearch.aspx>

MU Commercial Ag Dairy Focus Team

<http://agebb.missouri.edu/commag/dairy/>

MU Pasture-Based Dairy Team

<http://agebb.missouri.edu/dairy/grazing/contacts/>

Other resources that have been developed by the University of Missouri Extension include:

Missouri Dairymen's Resource Guide

<http://agebb.missouri.edu/dairy/>

AFO Site Evaluation Tool

<http://ims.missouri.edu/afosite/>

Missouri Dairy Models

<http://agebb.missouri.edu/dairy/dairylinks/models.htm>

Missouri Dairy Business Opportunities

<http://agebb.missouri.edu/dairylink/opportunities/>

Missouri Climate Center

<http://climate.missouri.edu/>

By-Products

<http://agebb.missouri.edu/dairy/byprod/>

Missouri Land Survey

<http://agebb.missouri.edu/mgt/landsurv/>

Contact State Inspection Agencies and Local Permitting Authorities

Missouri State Milk Board

<http://www.mda.mo.gov/smb/smb.htm>

The 12-member board administers the state's Grade A and manufacturing grade milk sanitation programs. The board administers milk inspection relating to Grade A milk and milk supplies to assure uniformity of procedures and interpretation of milk inspection regulations. Developing an early relationship with the local milk inspector who works for the Missouri State Milk Board will help the dairy producer and the state milk board understand building plans, potential changes needed and inspection processes. Contact the Missouri State Milk Board for the phone number of milk inspector covering your area:

Gene Wiseman, Missouri State Milk Board Executive Secretary

Phone: (573) 751-3830

E-mail: Gene.Wiseman@mda.mo.gov

The Missouri State Milk Board has developed an informational guide for the construction and reconstruction of milk facilities in the state of Missouri. The Informational Guide for Construction and Reconstruction of Milking Facilities can be downloaded at <http://mda.mo.gov/animals/pdf/constructionguidelines.pdf>.

Missouri State Milk Board regulations meet the FDA Pasteurized Milk Ordinance, 2009 requirements (<http://www.fda.gov/downloads/Food/FoodSafety/Product-SpecificInformation/MilkSafety/NationalConferenceonInterstateMilkShipmentsNCIMSModelDocuments/UCM209789.pdf>). Regulations adopted by the Missouri State Milk Board can be found on their website: <http://mda.mo.gov/animals/milk/>



Missouri Department of Natural Resources

<http://www.dnr.mo.gov/env/wpp/cafo/>

The Missouri Department of Natural Resources is in charge of protecting water quality throughout the state for animal feeding operations (AFO) and concentrated animal feeding operations (CAFO). Depending on the size and type of dairy operation, various permits may be needed to construct and operate a dairy. Generally, dairy operations with less than 700 cows do not need to obtain a construction or operating permit since they do not meet the definition of a CAFO.

Permitting of CAFOs

<http://www.dnr.mo.gov/pubs/pub2351.pdf>

Guide to AFOs

<http://www.dnr.mo.gov/pubs/pub915.pdf>

Permitting AFOs in Missouri

<http://agebb.missouri.edu/commag/permit/>

Local Permitting Authorities

County or township authorities may have certain rules and requirements that may pertain to constructing a new dairy operation. Generally, the county clerk's office is good place to contact and ask about any local restrictions. University of Missouri Extension maintains a web page that has listings of all known livestock restrictions in the state, but it is still advisable to contact each county to verify this information: <http://agebb.missouri.edu/commag/permit/restrictions.asp>

Submit Plans to Inspection Agencies and Local Authorities for Review

Missouri State Milk Board will need to review all plans and accept them to be granted a Grade A or manufacturing grade permit. Missouri Department of Natural Resources will need to review and accept permit applications if permits are needed for the dairy operation. If a county or township has a local ordinance or zoning restriction, plans may be needed for their review. These agencies will need sufficient time to review these materials so plan accordingly to your time line.

Sanitation Consultation from Milk Procuring Field Man and Inspection Agency

The Missouri State Milk Board has developed an informational guide for the construction and reconstruction of milk facilities in the state of Missouri. The Informational Guide for Construction and Reconstruction of Milking Facilities can be downloaded at the following web address: <http://mda.mo.gov/animals/pdf/constructionguidelines.pdf>

A milking time inspection is required for a Grade A permit for a new dairy or reapplication for a Grade A permit. A sample of a Grade A and manufacturing grade farm inspection report from the Missouri State Milk Board can be found on the following pages. Contact the Missouri State Milk board for contact information of the milk inspector covering your area (573-751-3830).



Missouri Grade A Inspection Report

MISSOURI STATE MILK BOARD
DAIRY FARM INSPECTION REPORT

INSPECTING AGENCY

NAME		POUNDS SOLD DAILY	
LOCATION		PLANT	
BACTERIA COUNT		PERMIT NO.	

SIR: INSPECTION OF YOUR FARM TODAY SHOWED VIOLATIONS EXISTING IN THE ITEMS CHECKED BELOW. YOU ARE FURTHER NOTIFIED THAT THIS INSPECTION SHEET SERVES AS NOTIFICATION OF THE INTENT TO SUSPEND YOUR PERMIT IF THE VIOLATIONS NOTED ARE NOT IN COMPLIANCE AT THE TIME OF THE NEXT INSPECTION. (SEE SECTIONS 3 AND 5 OF THE GRADE A PASTEURIZED MILK ORDINANCE - 1978 RECOMMENDATIONS OF THE U.S. PUBLIC HEALTH SERVICE/FOOD AND DRUG ADMINISTRATION.)

COWS	MILKHOUSE OR ROOM - Continued	TRANSFER AND PROTECTION OF MILK
<p>1. Abnormal Milk:</p> <p>Cows secreting abnormal milk milked last or in separate equipment (a) ...</p> <p>Abnormal milk properly handled and disposed of (b) ...</p> <p>Proper care of abnormal milk handling equipment (c) ...</p>	<p>5E. Cleaning Facilities</p> <p>Two compartment wash and rinse vat of adequate size (a) ...</p> <p>Suitable water heating facilities (b) ...</p> <p>Water under pressure piped to milkhouse (c) ...</p> <p>6. Cleanliness:</p> <p>Floors, walls, windows, tables, and similar non-product contact surfaces clean (a) ...</p> <p>No trash, unnecessary articles, animals or fowl (b) ...</p>	<p>14. Protection from Contamination:</p> <p>No overcrowding (a) ...</p> <p>Product and CIP circuits separated (b) ...</p> <p>Improperly handled milk discarded (c) ...</p> <p>Immediate removal of milk (d) ...</p> <p>Milk and equipment properly protected (e) ...</p> <p>Sanitized milk surfaces not exposed to contamination (f) ...</p> <p>Air under pressure of proper quality (g) ...</p>
<p>MILKING BARN, STABLE, OR PARLOR</p> <p>2. Construction:</p> <p>Floors, gutters, and feed troughs of concrete or equally impervious materials; in good repair (a) ...</p> <p>Walls and ceilings smooth, painted or finished adequately; in good repair; ceiling dust-tight (b) ...</p> <p>Separate stalls or pens for horses, calves, and bulls (c) ...</p> <p>Adequate natural and/or artificial light; well distributed (d) ...</p> <p>Properly ventilated (e) ...</p> <p>3. Cleanliness:</p> <p>Clean and free of litter (a) ...</p> <p>No swine or fowl (b) ...</p> <p>4. Cowyard:</p> <p>Graded to drain; no pooled water or wastes (a) ...</p> <p>Cowyard clean; cattle housing areas properly maintained (b) ...</p> <p>No swine (c) ...</p> <p>Manure stored inaccessible to cows (d) ...</p>	<p>TOILET AND WATER SUPPLY</p> <p>7. Toilet:</p> <p>Provided; conveniently located (a) ...</p> <p>Constructed and operated according to Ordinance (b) ...</p> <p>No evidence of human wastes about premises (c) ...</p> <p>Toilet room in compliance with Ordinance (d) ...</p> <p>8. Water Supply:</p> <p>Constructed and operated according to Ordinance (a) ...</p> <p>Complies with bacteriological standards (b) ...</p> <p>No connection between safe and unsafe supplies; (no improper submerged inlets) (c) ...</p>	<p>15. Drug and Chemical Control:</p> <p>Cleaners and sanitizers properly identified (a) ...</p> <p>Drug administration equipment properly handled and stored (b) ...</p> <p>Drugs properly labeled and stored (c) ...</p> <p>Drugs properly used and no avenue for direct contamination of milk (d) ...</p> <p>No illegal drugs (e) ...</p>
<p>MILKHOUSE OR ROOM</p> <p>5. Construction and Facilities:</p> <p>5A. Floors</p> <p>Smooth; concrete or other impervious material in good repair (a) ...</p> <p>Graded to drain (b) ...</p> <p>Drains trapped, if connected to sanitary system (c) ...</p> <p>5B. Walls and Ceilings</p> <p>Approved materials and finish (a) ...</p> <p>Good repair (windows, doors and hose port included) (b) ...</p> <p>5C. Lighting and Ventilation</p> <p>Adequate natural and/or artificial light; properly distributed (a) ...</p> <p>Adequate ventilation (b) ...</p> <p>Doors and windows closed during dusty weather (c) ...</p> <p>Vents and lighting fixtures properly installed (d) ...</p> <p>5D. Miscellaneous Requirements</p> <p>Used for milkhouse operations only; sufficient size (a) ...</p> <p>No direct opening into living quarters or barn, except as permitted by Ordinance (b) ...</p> <p>Liquid wastes properly disposed of (c) ...</p> <p>Proper hoseport where required (d) ...</p> <p>Acceptable surface under hoseport (e) ...</p> <p>Suitable shelter for transport truck as required by this Ordinance (f) ...</p>	<p>UTENSILS AND EQUIPMENT</p> <p>9. Construction:</p> <p>Smooth, impervious, nonabsorbent, safe materials:</p> <p>easily cleanable; seamless hooded pails (a) ...</p> <p>In good repair; accessible for inspection (b) ...</p> <p>Approved single-service articles; not reused (c) ...</p> <p>Utensils and equipment of proper design (d) ...</p> <p>Approved CIP milk pipeline system (e) ...</p> <p>10. Cleaning:</p> <p>Utensils and equipment clean (a) ...</p> <p>11. Sanitization:</p> <p>All multi-use containers and equipment subjected to approved sanitation process (see Ordinance) (a) ...</p> <p>12. Storage:</p> <p>All multi-purpose containers and equipment properly stored (a) ...</p> <p>Stored to assure complete drainage, where applicable (b) ...</p> <p>Single-service articles properly stored (c) ...</p>	<p>PERSONNEL</p> <p>16. Hand-washing Facilities:</p> <p>Proper hand-washing facilities in milk room and convenient to milking operations (a) ...</p> <p>Wash and rinse vats not used as hand-washing facilities (b) ...</p> <p>17. Personnel Cleanliness:</p> <p>Hands washed clean and dried before milking, or performing milkhouse functions; rewashed when contaminated (a) ...</p> <p>Clean outer garments worn (b) ...</p>
	<p>MILKING</p> <p>13. Flanks, Udders, and Teats:</p> <p>Milking done in barn, stable, or parlor (a) ...</p> <p>Brushing completed before milking begun (b) ...</p> <p>Flanks, bellies, udders, and tails of cows clean at time of milking; clipped when required (c) ...</p> <p>Teats treated with sanitizing solution and dried, just prior to milking (d) ...</p> <p>No wet hand milking (e) ...</p>	<p>COOLING</p> <p>18. Cooling:</p> <p>Milk cooled to 45° F. or less within 2 hours after milking except as permitted by Ordinance (a) ...</p> <p>Recirculated cooling water from safe source and properly protected; complies with bacteriological standards (b) ...</p>
		<p>PEST CONTROL</p> <p>19. Insect and Rodent Control:</p> <p>Fly breeding minimized by approved manure disposal methods (see Ordinance) (a) ...</p> <p>Manure packs properly maintained (b) ...</p> <p>All milkhouse openings effectively screened or otherwise protected; doors tight and self-closing; screen doors open outward (c) ...</p> <p>Milkhouse free of insects and rodents (d) ...</p> <p>Approved pesticides; used properly (e) ...</p> <p>Equipment and utensils not exposed to pesticide contamination (f) ...</p> <p>Surroundings neat and clean; free of harborages and breeding areas (g) ...</p> <p>Feed storage not attraction for birds, rodents or insects (h) ...</p>

REMARKS	
DATE	SANITARIAN

NOTE: Item numbers correspond to required sanitation items for Grade A raw milk for pasteurization in the Grade A Pasteurized Milk Ordinance Current Recommendations of the U.S. Public Health Service/Food and Drug Administration.

Missouri Manufacturing Grade Inspection Report



STATE OF MISSOURI
STATE MILK BOARD
PO BOX 630
1616 MISSOURI BLVD.
JEFFERSON CITY, MO 65102
PHONE: 573-751-3830

FARM INSPECTION REPORT

PRODUCER		DATE	PRODUCER NUMBER
ADDRESS		CITY	
COUNTY	STATE	ZIP CODE	TIME <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
DAILY PRODUCTION LBS.	FREQUENCY OF PICKUP	NAME OF RECEIVING PLANT	

An approved farm requires that all "Facilities" listed below be rated "Satisfactory;" that the TOTAL score for the applicable "Methods" is not less than 85% of the total maximum score. Subitems may be related in quarter points. **NOTE:** Do not score any item or subitem unless information is available concerning it.

FACILITIES

	CHECK ONE			CHECK ONE		MAXIMUM POSSIBLE SCORE
	SATIS-FACTORY	UNSATIS-FACTORY		SATIS-FACTORY	UNSATIS-FACTORY	
1. Health of Herd a. Appears Healthy			2. Water Supply a. Safe, clean			POINTS DEDUCTED
b. Follows USDA animal health program			3. Sewage Disposal			NUMERICAL SCORE
						PERCENTAGE SCORE %

METHODS

	MAX SCORE	SCORE	POINTS OFF		MAX SCORE	SCORE	POINTS OFF		MAX SCORE	SCORE	POINTS OFF
4. Milkhouse/Milkroom a. Location and size	1			e. Sanitized before use	5			d. Floors & gutters, clean, good repair	4		
b. Lighting and ventilation	2			f. Cleaning supplies and brushes available and properly stored	2			e. Walls & ceilings, clean, good repair	4		
c. Construction (1) floors	3			6. Bulk Milk a. Tank construction	2			f. Pens & alleyways clean	3		
(2) walls and ceilings	3			b. Clean and good condition	5			8. Premises well kept	2		
(3) doors, screens and partitions	3			c. Milk cooled promptly & properly held (temp. _____ F°)	5			9. Yard or Lofting Area a. Clean and drained	3		
d. Facilities (water, wash vats, racks)	2			d. Properly located	2			b. Manure properly handled & stored	3		
e. Usage for milk handling and utensil care only	2			e. Outside slab and hoseport	1			10. Milking Procedures a. "Abnormal Milk Program" procedures followed	4		
f. Cleanliness and flies	4			OR				b. Cows clean	2		
g. Single service items properly stored	1			Can Milk a. Cooler clean, good operating order	3			c. Udders & teats washed & wiped before milking	3		
h. Pesticides, antibiotics and insecticides properly stored	5			b. Cans clean, good condition	5			d. Milker's clothing clean & dry, no cuts or sores	2		
5. Utensils and Equipment a. Milking machines (head claw, pulsator, inflations, tubes, air hoses, etc.) - good condition, clean, properly stored	6			c. Milk cooled promptly & properly held (temp. _____ F°)	5			e. Milk stools and surcingles clean, properly stored	1		
b. Pails, strainers and other utensils - good condition, clean, properly stored	4			d. Properly located	2			f. No dusty operations during milking	1		
c. Milk lines	5			7. Barn or Milking Area a. Size and arrangement	1			g. Feed bin kept clean, free from foul odors	1		
d. Vacuum lines	1			b. Fowl, swine & other animals properly confined	1				100		
				c. Lighting and ventilation	1						

REMARKS: EXPLAIN WHY POINTS DEDUCTED.

DATE WELL SAMPLED

NEXT SAMPLING DUE

On the basis of this inspection, the farm is ☐ New ☐ Certified ☐ Not Certified ☐ Degrade

SIGNATURE

DATE